

ABSTRACT

A sodium chlorite solution is admixed with a second solution containing an acid to make a reacted mixture. The reacted mixture is introduced into a water system, viz. a conduit in which water flows or a tank containing water. The reacted mixture is added to the water system to inhibit and/or eliminate bacterial fouling in the system, and/or inhibiting and/or removing mineral deposits from the system, and/or for reducing or eliminating microorganisms from the system. The second component is acidic enough to convert the sodium chlorite into chlorine dioxide while remaining unaffected in the reacted mixture and at the same time being a mineral antiscalant. Optimum conversion of the sodium chlorite component into active chlorine dioxide requires at least several minutes reaction time and, preferably, the use of a suitable catalyst, such as sodium molybdate.